

# Heuristic Evaluation of Muncher

## 1. Problem

Muncher is an app that helps groups decide on a place to eat. The UI consists of a chat interface for members of the group to discuss the outing, polls to gauge member interests and the Muncher genie to give suggestions and a final decision.

## 2. Violations Found

1. **[H2-1 Visibility of system status] [Severity: 2] [Found by: C]**  
The settings in the sidebar needs a button to confirm the changes and go back to the previous sidebar screen. The only option right now is to go back to the chat window without confirmation that your changes were made. Fix: There should be a “Save Settings” button so the user knows that their actions had impact, and there should be a button to go back to the previous sidebar screen if the user decided not to change any settings.
2. **[H2-1 Visibility of system status] [Severity 2] [Found by: A, B, C]**  
There is no indication of the progress of your other group members when it comes to the ranking step or polls. Fix: It would be nice to see who has not responded yet so someone can send a reminder if the event is coming up soon but still has not been resolved, or if there were a timeout on the polls.
3. **[H2-1 Visibility of system status] [Severity 1] [Found by: A, B]**  
The coloring on the side is a nice idea, but possibly too subtle. Fix: it'd be more effective if the background of the outing also changes color correspondingly, i.e. that Alpha Eta Branches has a reddish background like Date night. Also be considerate of color blind users. Alternatively, icons might be more convenient in this case, with a question mark for unresolved, and check mark for resolved/planned out.
4. **[H2-1 Visibility of system status] [Severity 2] [Found by: A]**  
There is no immediate feedback from m after I put in which cuisine type I prefer at the moment. Fix: provide immediate feedback after each user input in the chat.
5. **[H2-2 Match between system and the real world] [Severity: 3] [Found by: C]**  
In the profile, it is unclear what the ranges are for the values, so the user could not properly gauge their interests. Fix: The bars should have some kind of min/max label so the user can accurately tell where they lie on the scale. Additionally, I think some of these values like price and distance preferences are more like a range that I'm willing to accept. So, perhaps there can be two indicators on the bar, one for min and one for max (like they do on airline and hotel reservation systems).
6. **[H2-3 User control and freedom] [Severity: 2] [Found by: C]**  
It is unclear whether you can change the time and date of an outing. Since the time and date are listed above the Admin bar, I'm not sure if they can be edited. However, they are also formatted similarly to the other buttons, so it is possible that they are interactive. Fix: the time and date should be changeable since this is the case in real life plans, and it should be clear to the user that they may click on these values to change them.

7. **[H2-3 User control and freedom] [Severity 2] [Found by: B]**  
Lack of user freedom to reject the restaurant Muncher selects. Fix: Add an accept/reject prompt after the result.
8. **[H2-3 User control and freedom] [Severity 3] [Found by: B]**  
Binary options on polls doesn't allow for user to express opinion if they don't like either options. Fix: Possibly provide another option to allow for user input.
9. **[H2-3 User control and freedom] [Severity 3] [Found by: B, C]**  
No way to get back to conversation if you modify settings with the (...) button. Clicking back on the conversation is not intuitive. Fix: Consider a < button
10. **[H2-4 Consistency and standards] [Severity: 1] [Found by: B]**  
Text message bubbles received are same color as text messages sent, which is not compliant with messaging standards. Fix: Consider changing the received text messages to the same color as Muncher bubbles.
11. **[H2-4 Consistency and standards] [Severity: 1] [Found by: A, B]**  
Background for Muncher text message alternates from gray for text polls to orange for restaurant polls, though both require interaction. Fix: change the first round of polls to have an orange background.
12. **[H2-4 Consistency and standards] [Severity: 2] [Found by: B, C]**  
Confused about the difference between outings shown inside (...) and the ones on the Outings main page - does the one inside a group message represent the number of outings within that group, or all of your upcoming outings? "Create New Outing" in the sidebar seems redundant. I didn't immediately understand whether there was a difference between creating an outing here and creating one from the home screen. Then, I realized it could mean to create an outing with the same group members. In this case, there is no distinction to make it clear that this is the case. The button should either be removed or its use case should be clarified.
13. **[H2-4 Consistency and standards] [Severity: 1] [Found by: A]**  
In the group chat, my message doesn't have an avatar like other messages. Users may have difficulty locating their own input when skimming through the dialogue. Fix: show user's own avatar in the chat.
14. **[H2-4 Consistency and standards] [Severity: 1] [Found by: A]**  
Different cuisine types have different displays for their results. Fix: use one consistent display for all the options within the same vote.
15. **[H2-4 Consistency and standards] [Severity: 1] [Found by: A]**  
Users may be confused about the word "preferences" in the homepage. Users may mistake it for preferences over food. According to team Muncher's README file, it is supposed to be settings of the app. Fix: use "settings" instead of "preferences".
16. **[H2-5: Error prevention] [Severity: 3] [Found by: A, B]**  
Booking a reservation, which is a big step, is only done with one tap. Fix: Presenting a confirmation button before they commit the reservation would be helpful.
17. **[H2-5 Error prevention] [Severity: 3] [Found by: C]**  
What if the reservation is not available or if the restaurant is not open during that date and time? It would not be convenient for the user to have to repeat the entire process. The restaurant being open should be a consideration in the selection algorithm, but the reservation being available would only be able to be checked at the end. You could suggest alternate times and dates or the next-most-voted restaurant.

18. **[H2-6 Recognition rather than recall] [Severity: 3] [Found by: A, C]**  
On the information page of each outing, there is no clear distinction between actionable vs. non-actionable items. Users have to memorize that settings is clickable whereas others are not. Fix: make clickable items prominent and different from non-clickable ones.
19. **[H2-6 Recognition rather than recall] [Severity: 2] [Found by: C]**  
Names are not displayed in the chat screen. Since typically not everyone uploads a picture, and sometimes pictures are not people's faces, it would be helpful to display a name beside the speech bubbles (potentially small and only once per group of messages, the way Facebook messenger does it).
20. **[H2-7. Flexibility and efficiency of use][Severity: 2] [Found by: A]**  
Currently, users don't have an easy way to pull out a group of people that they want to go out with regularly. According to team Muncher's README file, users either set a new date and time for a next event within 3 days from the current event, or go to history to access the contacts in the group. Fix: enable a feature to save a group chat as favorite so users can easily pull out the contacts for a next event.
21. **[H2-7 Flexibility and efficiency of use] [Severity: 1] [Found by: B]**  
For efficiency of use, add to calendar question following making reservation
22. **[H2-7 Flexibility and efficiency of use] [Severity: 2] [Found by: A, B]**  
Ranking step doesn't display the choices in any logical order, i.e. not sorted by number of votes
23. **[H2-7 Flexibility and efficiency of use] [Severity: 3] [Found by: B, C]**  
In the drag and drop part, it doesn't seem like the up and down arrows have a function. Since the task is to drag and drop the restaurants, the arrows seem redundant so I think they can be removed.
24. **[H2-7 Flexibility and efficiency of use] [Severity: 1] [Found by: B]**  
For efficiency of use, could ask if you'd like to "Decide Place Now" after the completion of a poll
25. **[H2-8. Aesthetic and minimalist design] [Severity: 1] [Found by: A]**  
In the user profile page, preferred cuisine types are highlighted and mixed with unselected cuisine types. Users may find unselected cuisine types irrelevant and/or distracting. Fix: group preferred cuisine types and put them in front of unselected types.
26. **[H2-8. Aesthetic and minimalist design] [Severity: 1] [Found by: A]**  
On the information page of each outing, the current layout puts 4 pieces of information fairly close to each other. Users may have difficulty parsing what is grouped together. found by A  
Fix: add more white space between each group to indicate relationships.
27. **[H2-8 Aesthetic and minimalist design] [Severity: 1] [Found by: C]**  
When creating an outing, setting the end date is not really necessary. This just adds information that the user can input that could cause scheduling problems (What restaurant accepts a multiple day reservation?). A special case would be if you're going to a bar around 11:30pm. In this case, if you set the end time to be past midnight, then you could set the end date to appear. In most cases, you would not need to show two dates.
28. **[H2-9 Help users recognize, diagnose, and recover from errors] [Severity: 3] [Found by: B]**  
Chat-based systems aren't irreversible, so there's no way to undo an accidental vote
29. **[H2-10 Help and documentation] [Severity: 2] [Found by: C]**

I know to click on the light bulb-speech bubble icon because of your presentations, but I don't think the average user would. Fix: Perhaps in the Muncher intro message, you could say something like "click on the light bulb if you need me."

### 3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
[H2-1: Visibility of Status]		1	3			4
[H2-2: Match Sys & World]				1		1
[H2-3: User Control]			2	2		4
[H2-4: Consistency]		5	1			6
[H2-5: Error Prevention]				2		2
[H2-6: Recognition not Recall]			1	1		2
[H2-7: Efficiency of Use]		2	2	1		5
[H2-8: Minimalist Design]				3		3
[H2-9: Help Users with Errors]				1		1
[H2-10: Documentation]			1			1
<b>Total Violations by Severity</b>		<b>8</b>	<b>10</b>	<b>11</b>		<b>29</b>
<b>Note: check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)</b>						

## 4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D	Evaluator E
sev. 0					
sev. 1	7	5	1		
sev. 2	4	4	6		
sev. 3	2	5	5		
sev. 4					
<b>total (sev. 3 &amp; 4)</b>	2	5	5		
<b>total (all severity levels)</b>	13	14	12		

## 5. Summary Recommendations

Overall, really great prototype! Most of our suggestions above are nitpicks about the parts that you have not focused on, so great job designing a pretty seamless main interface. Additionally, we really want to commend your attention to detail in designing your interface regarding fonts, icons and colors.

Here is a list of additional feedback on features that are not currently implemented in the medium-fidelity prototype. These questions arise as we went through the current prototype and I'm curious to see how they will play out in the final product.

1. Is there any way for me to know whether other members are good with the current number of polls? What will happen if I'm satisfied with the number of polls and want to decide a place for now but others are not? If I initiate "decide place now", can other members add more polls? If so, how will that impact the current "decide place now" process?
2. If I change my preferences while creating a new outing, will the changes be integrated into my default preferences in the user profile page? If so, will my default preference be an averaged preference over multiple outings or will it only reflect the changes I make in the new outing?
3. Can I change my default preference directly in the user profile page? If so, is there any error prevention mechanism to recover any mistake I make (e.g., reset my preference when I drag a bar by accident)?
4. Next, an overall recommendation for this design is that you make it clear that it is the polls and initial preferences that feed into the algorithm and chat does not. This group of CS students can understand that these would be the main source of data; however, since you are marketing a human-like all-intelligent genie, the average user might assume that the genie also reads the chat messages (since she is depicted to be part of the conversation). I can imagine people using the chat feature to express their desires, expecting Muncher to take these desires into account. Perhaps you could require at least one poll, or at least have Muncher chime in to suggest making a poll during the conversation, and explain that this is

what helps her decide. Also, I can imagine that some people might not be paying attention to their phones during this process. You could implement some kind of time limit so polls and final preferences are not held up by people who aren't at their phones.

5. Regarding your tasks, your README mentioned that part of task flow #3 would provide mapping directions to the restaurant, but that was not demonstrated in this prototype and I am not quite sure where it would fit in based on the 5 buttons, so that is one area to elaborate on. I would also have liked to see how group members decide on the time of the event as part of Task 2's focus on the comfort with the final decision.
6. Since Muncher's mission is to understand users' preferences and help them decide where to eat in groups, one important goal that the design needs to achieve is to not make users think. In fact, most of the violations in this report are identified because they tend to increase users' cognitive workload. These issues can be fixed in future iterations by providing immediate system feedback, adopting consistent UI, implementing minimalist design that only highlights the information that matters, and allowing users to tailor frequent actions.

## **Severity Ratings**

- 0 - don't agree that this is a usability problem
- 1 - cosmetic problem
- 2 - minor usability problem
- 3 - major usability problem; important to fix
- 4 - usability catastrophe; imperative to fix

## **Heuristics**

### **[H2-1: Visibility of System Status]**

- keep users informed about what is going on

### **[H2-2: Match Between System & Real World]**

- speak the users' language
- follow real world conventions

### **[H2-3: User Control & Freedom]**

- "exits" for mistaken choices, undo, redo
- don't force down fixed paths

### **[H2-4: Consistency & Standards]**

### **[H2-5: Error Prevention]**

### **[H2-6: Recognition Rather Than Recall]**

- make objects, actions, options, & directions visible or easily retrievable

### **[H2-7: Flexibility & Efficiency of Use]**

- accelerators for experts (e.g., gestures, kb shortcuts)
- allow users to tailor frequent actions (e.g., macros)

**[H2-8: Aesthetic & Minimalist Design]**

- no irrelevant information in dialogues

**[H2-9: Help Users Recognize, Diagnose, & Recover from Errors]**

- error messages in plain language
- precisely indicate the problem
- constructively suggest a solution

**[H2-10: Help & Documentation]**

- easy to search
- focused on the user's task
- list concrete steps to carry out
- not too large